

**To:** Hestmark, Martin[Hestmark.Martin@epa.gov]; Ostrander, David[Ostrander.David@epa.gov]  
**Cc:** Madigan, Andrea[Madigan.Andrea@epa.gov]; Land, Kelcey[Land.Kelcey@epa.gov]; Rudy, Michael[Rudy.Mike@epa.gov]; McCaffrey, Shawn[McCaffrey.Shawn@epa.gov]; Piggott, Amelia[Piggott.Amelia@epa.gov]; Bohan, Suzanne[bohan.suzanne@epa.gov]  
**From:** Sisk, Richard  
**Sent:** Wed 10/14/2015 5:13:58 PM  
**Subject:** RE: Response to your questions regarding Gold King Mine

## Deliberative Process/Ex. 5

Let me know if you think this will work.

## Deliberative Process/Ex. 5

Richard Sisk  
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U.S. EPA Region 8  
ENF-L  
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**From:** Hestmark, Martin  
**Sent:** Wednesday, October 14, 2015 9:40 AM  
**To:** Sisk, Richard; Ostrander, David  
**Subject:** FW: Response to your questions regarding Gold King Mine

Richard - Here you go.

**From:** Hestmark, Martin  
**Sent:** Wednesday, October 14, 2015 7:45 AM  
**To:** Grantham, Nancy; Smith, Paula; Ostrander, David  
**Cc:** McClain-Vanderpool, Lisa; Faulk, Libby  
**Subject:** RE: Response to your questions regarding Gold King Mine

The concentrations of metals in the solids in the pond will inform where the material is ultimately disposed of. Our options are to dispose of the material in a Superfund repository, or to dispose of the material in a solid waste landfill .

**From:** Grantham, Nancy  
**Sent:** Wednesday, October 14, 2015 6:09 AM  
**To:** Smith, Paula; Hestmark, Martin; Ostrander, David  
**Cc:** McClain-Vanderpool, Lisa; Faulk, Libby  
**Subject:** RE: Response to your questions regarding Gold King Mine

Hi – just checking on the status of this info.

Thanks ng

**From:** Smith, Paula

**Sent:** Tuesday, October 13, 2015 1:41 PM  
**To:** Hestmark, Martin <[Hestmark.Martin@epa.gov](mailto:Hestmark.Martin@epa.gov)>; Ostrander, David <[Ostrander.David@epa.gov](mailto:Ostrander.David@epa.gov)>  
**Cc:** Grantham, Nancy <[Grantham.Nancy@epa.gov](mailto:Grantham.Nancy@epa.gov)>; McClain-Vanderpool, Lisa <[Mcclain-Vanderpool.Lisa@epa.gov](mailto:Mcclain-Vanderpool.Lisa@epa.gov)>; Faulk, Libby <[Faulk.Libby@epa.gov](mailto:Faulk.Libby@epa.gov)>  
**Subject:** FW: Response to your questions regarding Gold King Mine  
**Importance:** High

David and Martin- Can you get us a response to the question below ASAP? Thanks!

**- Paula**

**From:** Grantham, Nancy  
**Sent:** Tuesday, October 13, 2015 10:58 AM  
**To:** StClair, Christie; Smith, Paula  
**Subject:** FW: Response to your questions regarding Gold King Mine

Hi Paula and Christie,

I sent the map she was looking for – can the region get us an answer to the additional question below.

Thanks ng

**From:** Lisa Marie Jacobs [mailto:[lmjacobs64@gmail.com](mailto:lmjacobs64@gmail.com)]  
**Sent:** Monday, October 12, 2015 9:12 PM  
**To:** Grantham, Nancy <[Grantham.Nancy@epa.gov](mailto:Grantham.Nancy@epa.gov)>  
**Cc:** StClair, Christie <[StClair.Christie@epa.gov](mailto:StClair.Christie@epa.gov)>; [foytlinfam@cox.net](mailto:foytlinfam@cox.net) Foytlin <[foytlinfam@cox.net](mailto:foytlinfam@cox.net)>  
**Subject:** Re: Response to your questions regarding Gold King Mine

Thanks, Nancy.

There was no map attached. Do you happen to have that?

Also, we are still very interested in knowing *where* the waste will end up. I understand that the sampling will determine where it goes, but what exactly are those possibilities? A landfill? Buried on private land or public land? And what criteria are used to make the determination for whatever choices are available?

I now have a very tight deadline, so if I could get this information quickly, that would be helpful.

Thanks,

Lisa Marie

On Mon, Oct 12, 2015 at 6:40 PM, Grantham, Nancy <[Grantham.Nancy@epa.gov](mailto:Grantham.Nancy@epa.gov)> wrote:

Hi Lisa Marie,

Sorry for the delay; please find answers to your questions below.

Thank you.

Nancy Grantham

1. Without a plume model, it seems that the sampling plan lacks pertinent information. Specifically, how does the sampling plan provide statistically meaningful information on the plume itself? The aerial photographs do not provide any information about what is happening on the bottom of the river, or the flora and soil on the riverbanks or its tributaries.

a. The purpose of the long-term monitoring plan (*Post-GKM Release Incident Conceptual Monitoring Plan*) is not to characterize the plume itself but rather to collect data in the surface waterbodies potentially impacted by the GKM Release Incident to determine if water and sediment quality trends are similar to trends observed before the GKM Release Incident. While the latest monitoring information after the GKM Release Incident shows contaminant levels have returned to pre-spill

levels, this study's monitoring information will serve to inform if these findings remain consistent across the range of annual flow conditions.

2. The plan mentions Region 8, but not Region 6 or 9. It seems to omit Colorado altogether. Are there separate plans for each region?

a. The plan includes 23 sampling locations that span the entire watershed. Locations were selected to ensure distribution of sampling locations across state and tribal jurisdictions and includes locations in Colorado, Southern Ute Reservation, New Mexico, Ute Mountain Ute Reservation, Navajo Nation, and Utah. Sites in Colorado, Southern Ute Reservation, Ute Mountain Ute Reservation, and Utah fall within EPA Region 8. Sites in New Mexico fall within EPA Region 6. Sites in the Navajo Nation fall within EPA Region 9. I've attached a map which shows the sampling locations identified in the plan.

3. The interim plan seems to lack any input from veterinarians, medical toxicologists or agricultural toxicologists. How will EPA assess potential health impacts to humans, wildlife, livestock and crops?

a. The *Post-GKM Release Incident Conceptual Monitoring Plan* was developed with input from EPA staff with a broad range of expertise including aquatic toxicologists, human health toxicologists, pharmacologists, risk assessors, biologists, environmental scientists, geographic information specialists, and a Doctor of Veterinary Medicine.

For water quality results, EPA plans to assess potential impacts to human health, aquatic life, and agricultural uses by comparing water quality results of this study against water quality standards of the states, tribes, and EPA's national water quality criteria recommendations.

4. Also, we had requested information about the concentrations in the containment ponds. We viewed three ponds where lime is being added, which we understand results in heavy metals forming hydroxates that fall to the bottom. How will that waste be dealt with? Will it be tested for safety, and where will it end up? How will the EPA determine when the ponds will be opened and released downstream? Is there a plan to monitor those discharges?

a. The treatment process in use at the mine is a standard metal hydroxide precipitation. Precipitates and sediments in the treatment ponds will be sampled

prior to disposal. The final disposal location will be determined by the sample results. Ponds will not be opened for release. Instead, all water will be pumped out of ponds and treated prior to release. Pond sediments/sludge will be disposed of properly based on sample results.

**From:** Lisa Marie Jacobs [mailto:[lmjacobs64@gmail.com](mailto:lmjacobs64@gmail.com)]  
**Sent:** Saturday, October 10, 2015 10:52 AM  
**To:** StClair, Christie <[StClair.Christie@epa.gov](mailto:StClair.Christie@epa.gov)>  
**Cc:** [foytlinfam@cox.net](mailto:foytlinfam@cox.net) Foytlin <[foytlinfam@cox.net](mailto:foytlinfam@cox.net)>; Grantham, Nancy <[Grantham.Nancy@epa.gov](mailto:Grantham.Nancy@epa.gov)>  
**Subject:** Re: Response to your questions regarding Gold King Mine

Hi Christie,

Any update on this information? Deadlines are drawing close.

Thanks,

Lisa Marie

On Thu, Oct 8, 2015 at 10:43 AM, StClair, Christie <[StClair.Christie@epa.gov](mailto:StClair.Christie@epa.gov)> wrote:

Hi Lisa,

This is just going through final reviews for accuracy, I should be able to get you something today.

Christie

Christie St. Clair  
Office of Public Affairs

Environmental Protection Agency

Washington, DC

o: 202-564-2880

m: 202-768-5780

**From:** Lisa Marie Jacobs [mailto:[lmjacobs64@gmail.com](mailto:lmjacobs64@gmail.com)]

**Sent:** Wednesday, October 07, 2015 8:15 PM

**To:** StClair, Christie

**Cc:** [foytlinfam@cox.net](mailto:foytlinfam@cox.net); Foytlin, Grantham, Nancy

**Subject:** RE: Response to your questions regarding Gold King Mine

Hello, just touching bases regarding my previous questions. Our journal deadline is approaching.

Lisa Marie

On Sep 30, 2015 3:23 PM, "StClair, Christie" <[StClair.Christie@epa.gov](mailto:StClair.Christie@epa.gov)> wrote:

Ok, will let the team know.

Christie St. Clair

Office of Public Affairs

Environmental Protection Agency

Washington, DC

o: 202-564-2880

m: 202-768-5780

**From:** Lisa Marie Jacobs [mailto:[lmjacobs64@gmail.com](mailto:lmjacobs64@gmail.com)]  
**Sent:** Wednesday, September 30, 2015 5:19 PM  
**To:** StClair, Christie  
**Cc:** Grantham, Nancy; [foytlinfam@cox.net](mailto:foytlinfam@cox.net) Foytlin  
**Subject:** Re: Response to your questions regarding Gold King Mine

If I could get information by mid-week of next week, that would work.

Thank you,

Lisa Marie

On Wed, Sep 30, 2015 at 1:47 PM, StClair, Christie <[StClair.Christie@epa.gov](mailto:StClair.Christie@epa.gov)> wrote:

Understood, Lisa Marie. What kind of a deadline are you working on for this?

And great to meet you!

Christie

**Christie St. Clair**

Office of Public Affairs

Environmental Protection Agency

Washington, DC

o: 202-564-2880

m: 202-768-5780

**From:** Lisa Marie Jacobs [mailto:[lmjacobs64@gmail.com](mailto:lmjacobs64@gmail.com)]

**Sent:** Wednesday, September 30, 2015 2:54 PM

**To:** Grantham, Nancy

**Cc:** [foytlinfam@cox.net](mailto:foytlinfam@cox.net) Foytlin; StClair, Christie

**Subject:** RE: Response to your questions regarding Gold King Mine

Nancy, thank you so much. If it is possible to communicate with experts in relative fields, that would be wonderful.

Lisa Marie Jacobs

On Sep 30, 2015 11:18 AM, "Grantham, Nancy"

<[Grantham.Nancy@epa.gov](mailto:Grantham.Nancy@epa.gov)> wrote:

Hi Lisa Marie,

Regarding your follow up questions below, I wanted to connect you with my colleague, Christie St. Clair in EPA's Washington, DC press office. She will facilitate getting answers to your questions.

Thank you.

Nancy Grantham

**From:** Lisa Marie Jacobs [mailto:[lmjacobs64@gmail.com](mailto:lmjacobs64@gmail.com)]

**Sent:** Wednesday, September 23, 2015 1:40 PM

**To:** Grantham, Nancy <[Grantham.Nancy@epa.gov](mailto:Grantham.Nancy@epa.gov)>; Cherri Foytlin <[foytlinfam@cox.net](mailto:foytlinfam@cox.net)>

**Subject:** Re: Response to your questions regarding Gold King Mine

Dear Ms. Grantham,

Thank you for providing the additional information, however, we still have some unanswered questions.

Without a plume model, it seems that the sampling plan lacks pertinent information. Specifically, how does the sampling plan provide statistically meaningful information on the plume itself? The aerial photographs do not provide any information about what is happening on the bottom of the river, or the flora and soil on the riverbanks or its tributaries. The plan mentions Region 8, but not Region 6 or 9. It seems to omit Colorado altogether. Are there separate plans for each region?

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Again, we thank you for your help,

Lisa Marie Jacobs

The ALERT Project, a project of Earth Island Institute

970-903-6818

Cherri Foytlin

Bridge the Gulf

Huffington Post

On Sun, Sep 13, 2015 at 7:41 AM, Grantham, Nancy  
<[Grantham.Nancy@epa.gov](mailto:Grantham.Nancy@epa.gov)> wrote:

Hi Lisa Marie,

Good meeting you in Durango. I hope you are well. We wanted to send you responses and updates to your questions.

Attached are copies of the sampling plans for the teams working on the effort. I hope they are helpful. You will see that some are marked interim and I wanted to note that it is not uncommon for sampling plans to be called interim final as they are designed to be updated/re-evaluated as conditions/needs change during the response.

I don't have the names of the laboratories but will send them along when I get them. You asked me about plume modeling during the incident. As far as we can tell, none of the response organizations conducted plume modeling to project the movement down the river. We did fly our aircraft, ASPECT, to monitoring the plume as it progressed. Photos from ASPECT can be found here - <https://flic.kr/p/y6Nf1s> , <https://flic.kr/p/y6UyZX> , <https://flic.kr/p/ym6N9o> , <https://flic.kr/p/yp953R>. The four treatment ponds allow use to reduce the amount of suspended metals and adjust the PH before the mine water flows into the

creek. The sediment in the ponds will be tested and the results will determine the appropriate disposal. Disposal isn't taking place yet since they are still in use.

The time of NPL listing varies based on a lot of different factors (how quickly the preliminary assessment/site inspection can be done, the Hazard Ranking System (HRS) score, support by the community and state, and more). That said – once all of those things are done – sites are proposed to the NPL twice a year and published in the Federal Register for comment. In general – it takes 12 to 18 months to move from proposed to final. But a lot of work has to happen before a site is proposed to the NPL.

Thank you.

Nancy Grantham

857-829-8250